

HEEMSKERK et al. – Appln. No. 10/562,345

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (Currently Amended) Process for preparing cephradine, said process comprising reacting 7- aminodesacetoxy cephalosporanic acid (7-ADCA) with D-dihydrophenylglycine in activated form (DHa) in the presence of an enzyme in a reaction mixture to form cephradine, resulting in a conversion of 7-ADCA into cephradine of at least 70 %, wherein the concentration D-dihydrophenylglycine (DH) in the reaction mixture is below 2wt. % throughout the reaction;

~~wherein throughout the reaction if said enzyme is a wild type penicillin acylase said reacting is carried out at a temperature below 15°C, or if said enzyme is an acylase having a higher S/H ratio than the wild type acylase of E.coli throughout the reacting step~~ and said reacting is carried out at a temperature of at least 15°C.

2. (Previously Presented) Process according to claim 1, wherein said reacting results in a conversion of 7-ADCA into cephradine of at least 80%.

3. (Previously Presented) Process according to claim 1, wherein said reacting results in a conversion of D-dihydrophenylglycine in activated form (DHa) into cephradine (CEF) of at least 70%, wherein

the conversion of DHa into CEF = $(n_{\text{CEF}} / n_{\text{DHa}}) * 100\%$;

n_{CEF} = quantity of cephradine formed (in mole); and

n_{DHa} = total quantity of DHa added to reaction mixture (in mole).

4. (Currently Amended) Process according to claim 1, wherein the concentration DH in the reaction mixture is maintained below 2 wt. %, throughout said reacting by controlling the pH of the reaction mixture between pH 6 and 9 ~~and/or when said enzyme is a wild type penicillin acylase said reacting is carried out at a temperature between 5 and 15°C, or when said enzyme is an acylase having a higher S/H ratio than the wild type~~